

Claims

1. A sensitive surface protective material for protecting a sensitive surface of an article comprising an electret treated spunbond nonwoven web comprising thermoplastic fibers  
 5 wherein the nonwoven web is bonded with a pattern having continuous bonded areas defining a plurality of discrete unbonded areas, wherein the sensitive surface protective material protects the sensitive surface from damage caused by particles.

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 10 ~~2. The sensitive surface protective material according to claim 1, wherein the thermoplastic fibers comprise monocomponent filaments.~~

3. The sensitive surface protective material according to claim 2, wherein the thermoplastic monocomponent filaments comprise polypropylene.

15 4. The sensitive surface protective material of claim 1, wherein the thermoplastic fibers comprise multicomponent filaments.

5. The sensitive surface protective material of claim 4, wherein the multicomponent filaments are bicomponent filaments comprising a first polymer component and a second polymer component.  
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6. The sensitive surface protective material of claim 5, wherein the first polymer component comprises polyethylene and the second polymer component comprises polypropylene.  
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7. The sensitive surface protective material of claim 6, wherein the first polymer component and the second polymer component are arranged in a side-by-side configuration.

30 8. The sensitive surface protective material of claim 5, wherein the multicomponent filaments comprise a sheath/core configuration and the sheath comprises the first polymer component and the core comprises the second polymer component.

35 9. The sensitive surface protective material of claim 1, wherein the nonwoven web has a Gurley stiffness of less than about 80 mg.

10. The sensitive surface protective material of claim 1, wherein the nonwoven web has a Gurley stiffness in the range of about 15 mg to about 75 mg.

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11. The sensitive surface protective material of claim 1, wherein the electret treatment charges the nonwoven web to about 1 kVDC/cm to about 12 kVDC/cm.

~~12. A storage sleeve comprising the sensitive surface protective material of claim 1.~~

- 10 13. A storage sleeve for holding an article having a sensitive surface to protect the sensitive surface from damage comprising
- a first web having a top edge, a bottom edge and two side edges and
- a second web comprising an electret treated spunbond nonwoven web comprising thermoplastic fibers wherein the nonwoven web is bonded with a pattern having
- 15 continuous bonded areas defining a plurality of discrete unbonded areas and having a top edge, a bottom edge and two side edges,
- wherein the first web is interconnected with the second web at or near the bottom edge and two side edges of the first web to form a pocket to hold said article having a sensitive surface.
- 20 14. The storage sleeve according to claim 13, wherein the first web comprises a film.
15. The storage sleeve according to claim 14, wherein the film comprises a polyolefin selected from the group consisting of polyethylene and polypropylene.
- 25 16. The storage sleeve according to claim 16, further comprising a third web having a top edge, a bottom edge and two side edges,
- wherein the second web is positioned between the first web and the third web and the first web and the third web are interconnected with the second web at or near the
- 30 bottom edge and the two side edges of the first web and the third web to form a pocket to hold an article having a sensitive surface on each side of the second nonwoven web.
17. The storage sleeve according to claim 16, wherein the first web and the third web comprise a film.

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18. The storage sleeve according to claim 17, wherein the film comprises a polyolefin selected from the group consisting of polyethylene and polypropylene.

5 19. The storage sleeve according to claim 18, wherein the nonwoven web comprises multicomponent thermoplastic filaments.

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10 20. The storage sleeve according to claim 19, wherein the multicomponent filaments are bicomponent filaments comprising a first polymer component and a second polymer component.

21. The storage sleeve according to claim 20, wherein the first polymer component is polyethylene and the second polymer component is polypropylene.

15 22. The storage sleeve according to claim 21, wherein the first polymer component and the second polymer component are arranged in a side-by-side configuration.

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20 23. The storage sleeve according to claim 21, wherein the multicomponent filaments comprise a sheath/core configuration and the sheath comprises the first polymer component and the core comprises the second polymer component.

24. The storage sleeve according to claim 13, wherein the nonwoven web comprises monocomponent thermoplastic filaments.

25 25. The storage sleeve according to claim 24, wherein the monocomponent thermoplastic filaments comprise polypropylene.

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30 26. The storage sleeve according to claim 13, wherein the electret treatment charges the nonwoven web to about 1 kVDC/cm to about 12 kVDC/cm.

27. A method of protecting a sensitive surface comprising contacting the sensitive surface with the sensitive surface protecting material of claim 1.

35 28. A stack of articles having a sensitive surface, comprising a plurality of articles having at least one sensitive surface and a sensitive surface protecting material between each article in the stack, wherein the sensitive surface protecting material comprises the sensitive surface protecting material of claim 1.